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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte CHRISTOPH VOSS

Appeal 2009-1075
Application 10/511,010
Technology Center 3600

Decided:¹ May 6, 2009

Before WILLIAM F. PATE, III, LINDA E. HORNER, and
KEN B. BARRETT, *Administrative Patent Judges*.

BARRETT, *Administrative Patent Judge*.

DECISION ON APPEAL

¹ The two-month time period for filing an appeal or commencing a civil action, as recited in 37 C.F.R. § 1.304, begins to run from the decided date shown on this page of the decision. The time period does not run from the Mail Date (paper delivery) or Notification Date (electronic delivery).

STATEMENT OF THE CASE

Christoph Voss (Appellant) seeks our review under 35 U.S.C. § 134 from a final rejection of claims 14-27. We have jurisdiction under 35 U.S.C. § 6(b).

SUMMARY OF THE DECISION

We AFFIRM.

THE INVENTION

Appellant's claimed invention pertains to an electromagnetic valve used in motor vehicle brake systems with wheel slip control. (*See* Substitute Specification filed Oct. 12, 2004 (Subst. Spec.) 1, ¶ [0001].) Claim 14, reproduced below with some paragraphing added, is representative of the subject matter on appeal.

14. An electromagnetic valve for slip-controlled motor vehicle brake systems, comprising:

a valve housing and

a first and a second valve closure member arranged in the valve housing and being able, in a coaxial arrangement in the valve housing, to open or close a first and a second valve passage,

including a pressure fluid inlet and a pressure fluid outlet opening into the valve housing,

with the first valve closure member being able to open or close the first valve passage positioned in the second valve closure member in response to an electromagnetic excitation of a valve coil, and with the second valve closure member opening the second valve passage under the influence of a spring exclusively in the open position of the first valve passage so that pressure fluid prevailing in the pressure fluid inlet

propagates to the pressure fluid outlet along a flow route inside the valve housing in which the first and the second valve passage are positioned, wherein the spring is placed outside the flow route,

the valve comprising a bowl-shaped stop fixedly secured in a housing step inside the valve housing remote from the flow route,

the stop having a bottom wall and an opening through the bottom wall through which the second valve closure member extends,

the stop circumscribing a portion of the second valve closure member and forming an annular space between the stop and the second valve closure member,

the spring being seated on the bottom wall in the annular space between the stop and second valve closure member.

THE REJECTIONS

The Examiner relies upon the following as evidence of unpatentability:

Eith	US 5,810,330	Sept. 22, 1998
Obersteiner (as translated) ²	DE 19836493 A1	Oct. 7, 1999
Holl (as translated)	DE 10010734 A1	Sept. 6, 2001

The following rejections are before us for review:

1. Claims 14-18, 21, 22, 24, 25, and 27 are rejected under 35 U.S.C. § 102(b) as being anticipated by Obersteiner;

² The Examiner states that, for purposes of this examination, U.S. Patent No. 6,435,210 B1 (issued August 20, 2002, to Obersteiner) (the ‘210 patent) is relied on as an English equivalent of Obersteiner. (Ans. 3.) However, the Examiner’s Answer also contains citations to the translation of record. (Ans. 12-15.) Unless otherwise indicated, citations in this opinion are to the translation by Schreiber Translation, Inc., PTO 08-0664.

2. Claims 19, 20, and 23 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Obersteiner and Eith;

3. Claims 14-18, 21, 22, and 24-27 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Holl and Obersteiner;

4. Claims 19, 20, and 23 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Holl, Obersteiner, and Eith.

ISSUE

Independent claim 14 recites “the valve comprising a bowl-shaped stop fixedly secured in a housing step inside the valve housing remote from the flow route.” Appellant argues that Obersteiner lacks this structure.

(App. Br. 6.) Specifically, Appellant contends that the Examiner has not shown that Obersteiner’s sleeve 14 (which the Examiner found to correspond to the recited stop) is fixedly secured in housing 9. (*Id.* at 4-6.) In response, the Examiner argues that Obersteiner’s sleeve 14 is “fixedly secured” in that it is held stationary at the step of housing 9. (Ans. 13.)

Therefore, the issue is: Has the Appellant shown that the Examiner erred in finding that Obersteiner discloses a stop fixedly secured in a housing step inside the valve.

FINDINGS OF FACT

We find that the following enumerated findings are supported by at least a preponderance of the evidence.

1. The ordinary meaning of the word “fixed” includes “[f]irmly in position; stationary.” THE AMERICAN HERITAGE DICTIONARY OF THE ENGLISH LANGUAGE (4th ed. 2000).

2. The ordinary meaning of the word “secured” includes “[t]o make firm or tight; fasten.” *Id.*

3. Appellant’s Specification states:

In addition, the electromagnetic valve is characterized in that the spring 17 is arranged outside the flow route that can connect the pressure fluid inlet 13 to the pressure fluid outlet 19. For this purpose, stop 3 is inserted remote from the flow route into the valve housing 1, at which stop the end of spring 17 remote from the second valve closure member 8 is supported. Consequently, spring 17 is not arranged in the flow route but above the transverse bores 21, 22 at stop 3. Stop 3 is secured to a housing step 19 [sic, 24] of the valve housing 1 to this end.

(Subst. Spec. 3, ¶ [0008].)

4. Appellant’s Specification does not explain how the stop is secured to the housing step, and does not use the term “fixedly.”

5. Obersteiner discloses an electromagnetic valve for use in a motor vehicle braking system with wheel slip control. (Obersteiner 2.) Obersteiner’s valve has two valve closure members – valve tappet 8 and valve piston 7 (which is arranged below valve tappet 8). (*Id.* at 4-5, fig. 2.) When the electromagnet (magnetic armature 11 and magnetic core 13) that opens valve tappet 8 is de-energized, spring 12 presses valve tappet 8 against its seat, thereby closing a first passage (fluid gate 3 in valve piston 7). (See *id.*, 5, 9, fig. 2.) The force of spring 12 on valve tappet 8 also presses valve piston 7 against its seat, thereby closing a second passage (fluid gate 4). (*Id.* at 5, 6.) When the electromagnet is energized, the valve tappet 8 is lifted off of valve piston 7, thereby opening the smaller passage (fluid gate 3). (See *id.* at 6-7.) When the valve tappet 8 is not pressing against valve piston 7 and when the force of spring 10 overcomes the force due to the pressure

differential across valve piston 7, spring 10 lifts valve piston 7, thereby opening the larger passage (fluid gate 4). (*See id.* at 7; fig. 2; *see also* Reply Br. 2 (Appellant stating that the pressure differential forces the valve piston 7 downward against the upward compressive force of the spring 10).)

6. Obersteiner's valve includes a sleeve 14 having a bottom wall through which valve piston 7 extends. (Obersteiner, fig. 2.) Sleeve 14 is bowl-shaped. (*Compare* Obersteiner, fig. 2 (sleeve 14) *with* Subst. Spec., figs. 1, 2 (Appellant's similarly bowl-shaped stop 3).) Obersteiner's spring 10, which encircles valve piston 7, is compressed between the bottom of sleeve 14 and a bead 7' on valve piston 7. (Obersteiner 7; fig. 2.) Sleeve 14 is positioned against a step in the valve housing 9. (*Id.*, fig. 2; *see also* *id.* at 8 (translation stating that the sleeve "is simultaneously positioned on impact on a small housing stage"); the '210 patent, col. 4, ll. 2-5 (the sleeve "is simultaneously positioned in abutment on a small housing step").)

7. Therefore, when Obersteiner's electromagnet is de-energized and also when the pressure differential across valve piston 7 is great, spring 10 is compressed and presses against the bottom of sleeve 14, thus holding sleeve 14 tightly against the step in housing 1.

8. When the sleeve 14 is against the housing step, the bottom of the sleeve is located a distance from the fluid gate 4 so that the sleeve is not an obstacle to fluid flow when valve piston 7 opens fluid gate 4. (Obersteiner 8; *see also* *id.*, fig. 2.) Obersteiner also explains that the arrangement is such that the spring on valve piston 7 does not hinder fluid flow through the larger fluid gate 4. (*Id.* at 7.)

9. Obersteiner describes "[a] construction which is especially favorable to manufacture and to handle" (Obersteiner 8; *see also* the

‘210 patent, col. 3, l. 61 – col. 4, l. 9.) Obersteiner explains that the valve piston 7, its spring 10, and non-return valve 24 are contained by the sleeve 14, forming an assembly. (Obersteiner 8 (incorrectly identifying sleeve 14 as item 24).) This arrangement prevents the non-return valve 24 from dropping out of the bypass channel 24’ in valve piston 7. (*Id.*) “The sleeve 24 is guided at least partially along a wall of the bore of the valve housing 9 and is simultaneously positioned on impact on a small housing stage.” (*Id.*; *See also* the ‘210 patent, col. 4, ll. 2-5 (the sleeve “is simultaneously positioned in abutment on a small housing step”). Thus, the assembly is inserted into the valve and is guided by the housing bore until the sleeve contacts the step in the housing. (*See* Obersteiner, fig. 2.)

PRINCIPLES OF LAW

During examination of a patent application, pending claims are given their broadest reasonable construction consistent with the specification. *In re Prater*, 415 F.2d 1393, 1404-05 (CCPA 1969); *In re Am. Acad. of Sci. Tech Ctr.*, 367 F.3d 1359, 1364 (Fed. Cir. 2004). It is Appellant’s burden to precisely define the invention, not the United States Patent and Trademark Office’s. *In re Morris*, 127 F.3d 1048, 1056 (Fed. Cir. 1997) (citing 35 U.S.C. § 112, ¶ 2). Appellant has the opportunity to amend the claims during prosecution, and broad interpretation by the Examiner reduces the possibility that the claim, once issued, will be interpreted more broadly than is justified. *Prater*, 415 F.2d at 1404-05.

“A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior

art reference.” *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631 (Fed. Cir. 1987) (citations omitted).

ANALYSIS

The Rejection of Claims 14-18, 21, 22, 24, 25, and 27 Under 35 U.S.C. § 102(b) as Being Anticipated by Obersteiner

Appellant argues the rejected claims as a group. (App. Br. 4-6.) We select claim 14 as the representative claim, and claims 15-18, 21, 22, 24, 25, and 27 stand or fall with claim 14. 37 C.F.R. § 41.37(c)(1)(vii) (2008).

Appellant only disputes the Examiner’s finding that Obersteiner discloses a stop fixedly secured in a housing. (See App. Br. 4.) Thus, we first turn to the proper interpretation of the phrase “fixedly secured.” Claims in a pending patent application are given their broadest reasonable construction consistent with the specification and are read in light of the specification as it would be interpreted by a person of ordinary skill in the art. *In re Am. Acad. of Sci. Tech. Ctr.*, 367 F.3d at 1364 (citations omitted). Appellant’s Specification explains that, in a particular prior art electromagnetic valve, the spring acting on a valve closure member was located in the fluid flow path, creating an undesirable flow resistance. (Spec. 1, ¶ [0002].) In contrast, the spring of Appellant’s valve is “placed outside the flow route.” (Claim 14; see also Spec. 3, ¶ [0008].) To accomplish this, Appellant’s stop 3, which supports the spring 17, is inserted into the valve housing 1 “remote from the flow route,” and is “secured to a housing step 19 [sic, 24]” so as to position the spring out of the flow route. (Fact 3.) The Specification does not explain how the stop is “secured,” and does not use the term “fixedly.” (Fact 4.) Therefore, within the context of claim 14 and in view of the Specification and the ordinary meaning of

“fixed” and “secured” (*see* Facts 1, 2), we construe the stop to be “fixedly secured” when the stop is held tightly in position against the housing step such that the spring is prevented from entering the flow path.

Obersteiner discloses an electromagnetic valve with a bowl-shaped sleeve 14 having a bottom wall through which a second valve closure member (valve piston 7) extends. (Facts 5, 6.) Thus, Obersteiner’s sleeve 14 corresponds to Appellant’s stop. At least when Obersteiner’s electromagnet is de-energized and also when the pressure differential across valve piston 7 is great, spring 10 is compressed and presses against the bottom of sleeve 14, thus holding sleeve 14 tightly against the step in housing 1. (Fact 7.) Under these conditions – when the sleeve is held tightly against the housing step – the bottom of the sleeve and the spring are positioned outside of the fluid flow path so as not to hinder the flow through the valve. (Fact 8.) Therefore, Obersteiner discloses a “fixedly secured” stop where that phrase is given its broadest reasonable construction.

Appellant contends that Obersteiner’s sleeve 14 is free to move in the housing 9 because Obersteiner describes the sleeve as “guided” along the wall of the housing bore. (App. Br. 4-5 (citing the ‘210 patent, col. 4, ll. 2-5); Reply Br. 2.) Appellant reasons that the sleeve cannot be “fixedly secured” where it is free to move. (App. Br. 5.) The Examiner responds that the Obersteiner’s “guided” discussion pertains to the construction of the valve. (Ans. 14.) The Examiner’s interpretation is the more plausible one. Obersteiner’s “guided” language is in the larger context of the description of “[a] construction which is especially favorable to manufacture and to handle” (*See* Fact 9.) Obersteiner explains that the valve piston 7, its spring 10, and non-return valve 24 are contained by the sleeve 14, forming

an assembly. (*Id.*) This assembly is inserted into the valve housing bore, with the sleeve “guided at least partially along a wall of the bore,” until the sleeve contacts the housing step. (*Id.*)

Next, Appellant interprets Obersteiner’s figure 2 as indicating that the sleeve is unrestrained axially, radially, and laterally in the bore. (App. Br. 5.) Because figure 2 is only a cross-sectional view of the valve, we cannot conclude that the sleeve is indeed unrestrained in the bore as Appellant urges. Nonetheless, even if the sleeve is capable of moving at some point during valve operation, the outcome of this appeal does not change because we have found that the sleeve is held tightly against the housing step at least when the spring 10 is compressed (Fact 7).

Lastly, Appellant asserts that “[i]f ‘fixedly secured’ is interpreted to cover movable objects, then the ‘fixedly secured’ feature of claim 14 is being ignored.” (App. Br. 6.) Appellant’s assertion is based on the assumption that Obersteiner’s sleeve moves inside the valve housing. As discussed above, we find that Obersteiner’s sleeve is held firmly against the step, and thus not moving, at least when the spring is under compression. The “fixedly secured” language is not being ignored.

Appellant has not shown that the Examiner erred in rejecting claim 14 as anticipated by Obersteiner. Accordingly, we sustain the rejection of claim 14, and of claims 15-18, 21, 22, 24, 25, and 27 which fall with claim 14.

The Rejection of Claims 19, 20, and 23 Under 35 U.S.C. § 103(a) as Being Unpatentable Over Obersteiner and Eith

Appellant asserts that claims 19, 20, and 23, which depend from claim 14, are patentable because Obersteiner does not teach “a bowl-shaped stop fixedly secured in a housing step inside the valve housing remote from the

flow route” as recited in claim 14. (App. Br. 7.) We have addressed this argument above, and found it unpersuasive. Thus, Appellant has also failed to persuade us that the rejection of claims 19, 20, and 23 is erroneous.

The Rejection of Claims 14-18, 21, 22, and 24-27 Under 35 U.S.C. § 103(a) as Being Unpatentable Over Holl and Obersteiner

Appellant argues that independent claim 14 and claims 15-18, 21, 22 and 24-27 which depend therefrom are patentable because Obersteiner lacks the fixedly secured stop. (App. Br. 7.) For the reasons already discussed, we disagree. Accordingly, we affirm the rejection of 14-18, 21, 22, and 24-27 as being unpatentable over Holl and Obersteiner.

The Rejection of Claims 19, 20, and 23 Under 35 U.S.C. § 103(a) as Being Unpatentable Over Holl, Obersteiner, and Eith

Appellant again argues that the rejected claims are patentable because Obersteiner does not teach the fixedly secured stop. (App. Br. 8.) We have found otherwise, and thus we affirm the rejection of claims 19, 20, and 23 as being unpatentable over Holl, Obersteiner, and Eith.

CONCLUSION

We conclude that the Appellant has not shown that the Examiner erred in finding that Obersteiner discloses a stop fixedly secured in a housing step inside the valve. Thus, Appellant has failed to show that the Examiner erred: 1) in rejecting claims 14-18, 21, 22, 24, 25, and 27 as being anticipated by Obersteiner; 2) in rejecting claims 19, 20, and 23 as being unpatentable over Obersteiner and Eith; 3) in rejecting claims 14-18, 21, 22, and 24-27 as being unpatentable over Holl and Obersteiner; and 4) in

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rejecting claims 19, 20, and 23 as being unpatentable over Holl, Obersteiner, and Eith.

DECISION

The decision of the Examiner to reject claims 14 through 27 is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a). *See* 37 C.F.R. § 1.136(a)(1)(iv) (2007).

AFFIRMED

LV:

RATNERPRESTIA
P.O. BOX 980
VALLEY FORGE, PA 19482